

Hypothermia Mortality in Missouri 1985–95

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Bitterly cold weather is a significant hazard to life in our nation and in Missouri. The Centers for Disease Control and Prevention report that in the United States about 780 persons die each year from cold exposure and about half of these are age 65 and over. Unfortunately, this also occurs in Missouri where we have averaged 13 deaths per year from hypothermia during the past ten winters, of which 46 percent have been elderly persons. See Figures 1 and 2. This emphasizes a need to be very supportive of persons at highest risk, and especially so with increasing age.

Hypothermia occurs when the body temperature falls below 95°F or 35°C. Early and mild symptoms include shivering, slurred speech, mental slowness and lethargy, muscular stiffness and clumsiness. Symptoms of severe hypothermia include mental confusion, disorientation, stupor or coma, absence of shivering, stiff or rigid muscles, shallow and very slow breathing, weak pulse and fall in blood pressure. If symptoms of hypothermia are detected, immediate medical attention is warranted.

The elderly, who are often homebound and bedfast, are particularly vulnerable to hypothermia due to having less fatty tissue insulation, impaired shivering mechanism, lower metabolic rates, chronic illnesses, limited mobility and less perception of the cold. They may also be trying to reduce expenditures on heating and may gradually get so cold that their body temperature falls below a critical level, and even at temperatures well above the freezing mark, they quietly die.

The very young are also highly vulnerable to hypothermia, but society protects them well (babies should have sleeping rooms maintained at tempera-

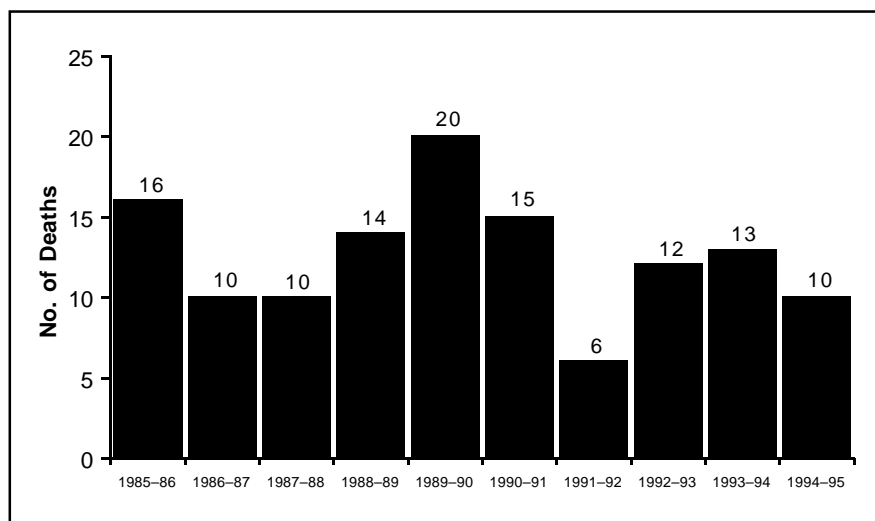


Figure 1. Hypothermia deaths, Missouri, 1985-86 to 1994-95.

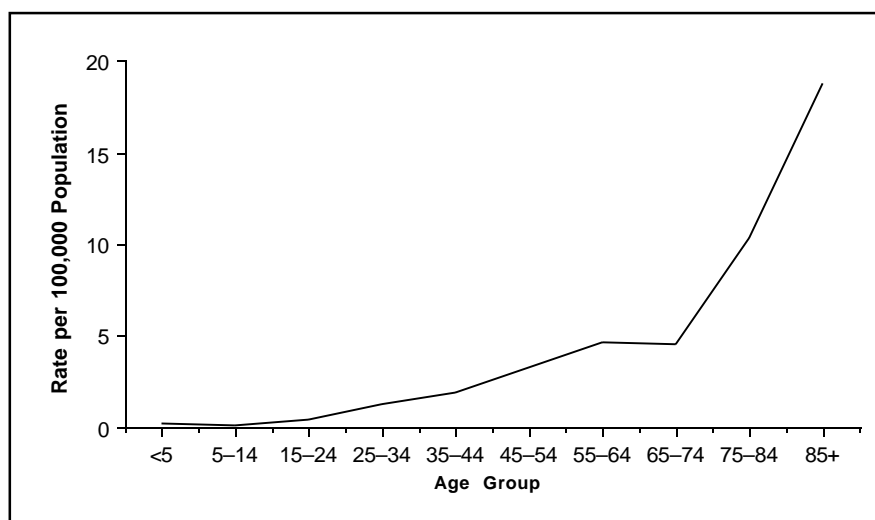


Figure 2. Hypothermia death rates per 100,000 population by age group, Missouri, 1985-86 to 1994-95.

tures that feel comfortable to you and should have multiple layers of clothing and blankets that do not restrict the baby's breathing or movement).

The homeless and disadvantaged are at greater risk for hypothermia. Other risk factors associated with injury and death from the cold include alcohol use, certain illnesses and some medications that affect the nervous and vascular systems.

Illnesses that may adversely affect a person's response to cold temperatures include:

- Hypothyroidism and other disorders of the body's hormone system.
- Stroke and other disorders that cause paralysis or reduce awareness.
- Severe arthritis, Parkinson's disease and other illnesses that limit activity.
- Any condition that reduces the normal flow of blood.
- Memory disorders.

Medications reported to contribute to core temperature depressions include: Acetaminophen, Atropine, Barbiturates, Benzodiazepines, Bethanechol, Bromocriptine, Butyrophenones, Chloral hydrate, Clonidine, Cyclic antidepressants, Glutethimide, Lithium, Morphine, Nicotinic acid, Organophosphates, Phenformin, Phenothiazines, Reserpine and Tetrahydrocannabinol. Physicians are encouraged to inform patients regarding medications that affect body heat.

Increased awareness is the most effective way to prevent and treat hypothermia. Doctors, nurses and health professionals—including those working in emergency rooms—must remember to check for hypothermia.

Hypothermia became reportable by law in Missouri effective April 8, 1993. The Department of Health routinely maintains surveillance on hypothermia by asking local health departments to rapidly forward information on cases to the state level where they can be compiled weekly or more often in times of extreme cold. Physicians are urged to report cases of hypothermia promptly to their local health departments.

Remember these important facts:

- * Hypothermia is a drop in body temperature to below 95°F (35°C).
- * Older people are at risk of hypothermia not only in cold weather, but in mildly cool temperatures as well.
- * Hypothermia affects older people more often than younger people.
- * Alcoholic drinks, certain illnesses and some medications can affect the body's ability to regulate temperature.
- * A person suffering from hypothermia is often confused, sleepy or can have slurred speech.
- * Hypothermia is dangerous and requires immediate medical care.